

In re: Khayrallah et al.
Serial No. 09/800,143
Filed: March 6, 2001
Page 2 of 5

REMARKS

Applicants appreciate the Examiner's indication in the Office Action that the claim objections have been withdrawn and the indication of allowance of the system claims. Office Action, p. 3. The Office Action asserts a Section 101 rejection against the previously allowed method claims. Applicants submit the Section 101 rejections should be withdrawn for at least the reasons discussed below.

Claims 4-20 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Office Action, p. 2. More particularly, the Office Action asserts that Claim 4 is "directed to a method of processing a signal. However, a claim directed to a signal per se is an abstract idea therefore non-statutory." Office Action, p. 2. Claim 4 recites:

A method for selecting a frequency hopping mode for a communication in a communication system having a plurality of transmission schemes, the method comprising:

selecting one of a plurality of candidate frequency hopping modes as the frequency hopping mode for the communication based on a transmission scheme of the plurality of transmission schemes selected for the communication, wherein selecting one of the plurality of transmission schemes to be used for the communication comprises dynamically selecting one of the plurality of transmission schemes to be used for the communication based on at least one of a characteristic of the communication and a characteristic of a channel over which the communication is to be communicated;

wherein each of the transmission schemes has at least one of an associated coding rate and modulation scheme; and

wherein the communication comprises a packet distributed over a plurality of transmission windows and wherein ones of the plurality of candidate frequency hopping modes define a transmission frequency for the packet in corresponding ones of the transmission windows.

Thus, Claim 4 is directed to a method. As such, Applicants respectfully traverse the statutory subject matter rejection, as the claims recite methods that accomplish a practical application, namely, selecting a frequency hopping mode for transmission of a communication in a communication system. See State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998).

Applicants respectfully submit that the Office Action has failed to set forth a *prima facie* case of unpatentability under 35 U.S.C. § 101. Since the claims are directed to

In re: Khayrallah et al.
Serial No. 09/800,143
Filed: March 6, 2001
Page 3 of 5

categories of inventions that clearly fall within the scope of 35 U.S.C. § 101, namely, methods, Applicants respectfully submit that it is incumbent upon the Examiner to determine that the claims fall within a judicial exception to statutory subject matter, such as laws of nature, mathematical algorithms, or natural phenomena, before a rejection under 35 U.S.C. § 101 may be considered. Until such a finding is made, an inquiry into whether or not a claimed invention produces a "useful, concrete or tangible result" is irrelevant, because that inquiry is only appropriate to determine if a claim, that would otherwise be unpatentable as falling within a judicial exception to statutory subject matter, is nevertheless eligible for patentability under 35 U.S.C. § 101. *See Diamond v. Diehr*, 450 U.S. 175, 209 USPQ 1 (1981). Because in this case the Office Action failed to find, and cannot find, that the claimed invention falls within a judicial exception to statutory subject matter, the characterization of the claims as failing to produce "a useful concrete and tangible result" is irrelevant.

Accordingly, Applicants respectfully submit that Claims 4-20 meet all the requirements of 35 U.S.C. §101 for at least these reasons.

Furthermore, even were the requirement of a useful tangible and concrete result to be applicable to this case, that standard is met. As discussed in the Manual Of Patent Examining Procedure (MPEP):

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." *State Street*, 149F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research....

[T]he following [example illustrates a] claimed [invention] that [has] a practical application because [it produces] useful, concrete, and tangible result: ...

-"[T]ransformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result' — a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." *State Street*, 149 F3d at 1373, 47 USPQ2d at 1601....

MPEP, Sec. 2106(II).(A.), page 2100-6, cols. 1-2. (Underline added) As further discussed in

In re: Khayrallah et al.
Serial No. 09/800,143
Filed: March 6, 2001
Page 4 of 5

the MPEP:

Office personnel have the burden to establish a *prima facie* case that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when the claim is devoid of any limitation to a practical application in the technology arts should it be rejected under 35 U.S.C. Sec. 101. ...

An applicant may assert more than one practical application, but only one is necessary to satisfy the utility requirement.

MPEP, Sec. 2106(II)(A.), page 2100-7, col. 1. (Underline added.)

Claim 4 includes numerous recitations related to transmission of signals in a communication system. Such communication systems are in widespread use throughout the United States and the world. The ability to communicate between remote locations and to understand the received communications depends on various aspects of encoding, such as the selection of a frequency hopping mode as recited in Claim 4. Rejected independent Claim 12 includes further recitations related to the transmitting of the communication packet. It is hard to imagine a more practical result. Indeed, the transformation of data to a share price, found acceptable in *State Street* as discussed in the MPEP, would appear, if anything, to be significantly less practical. Accordingly, even were the practical application standard properly applied to this case, the rejections should be withdrawn as pending Claim 4 and the other rejected independent claims clearly meet this requirement.

CONCLUSION

Applicants respectfully submit that the pending claims are in condition for allowance, which is respectfully requested in due course. Applicants encourage the Examiner to contact the undersigned by telephone to address any remaining issues.

Respectfully submitted,


Robert W. Glatz

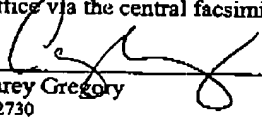
Registration No. 36,811

In re: Khayrallah et al.
Serial No. 09/800,143
Filed: March 6, 2001
Page 5 of 5

Myers Bigel Sibley & Sajovec
P.O. Box 37428
Raleigh, NC 27627
(919) 854-1400 phone
(919) 854-1401 fax

CERTIFICATION OF FACSIMILE TRANSMISSION
UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office via the central facsimile number 571-273-8300 on March 6, 2006.



Carey Gregory
512730